

## REMARKS

In view of the above amendments and following remarks, reconsideration of the rejections and further examination are requested.

Claims 1-4 are pending in this application and stand rejected. Claim 1 is amended herein. No new matter has been added.

Claims 1-4 have been rejected under 35 U.S.C. § 102(c) as being unpatentable over Naganuma (U.S. Patent No. 7,133,008) (hereinafter referred to as "Naganuma").

The above-mentioned rejection is submitted to be inapplicable to amended claim 1 for the following reasons.

Claim 1 recites a method of driving a plasma display panel including, in part, providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field, a sustain pulse in the first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in the second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration and a falling period of falling in the specified time. The first leading edge duration and the second leading edge duration are a time until a voltage is fixed by the power source by elevating a voltage of the scan electrode or the sustain electrode by a power recovery circuit.

In contrast to the present invention, Naganuma does not disclose a sustain pulse in a first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in a second sustaining period that has a second leading edge duration that is shorter than the first leading edge duration and a falling period of falling in the specified time, wherein the first leading edge duration and the second leading edge duration are a time until a voltage is fixed by elevating the voltage.

Instead, Naganuma discloses in Figure 8 and col. 9, lines 1-22, a waveform IPyb which is generated when a switch S4b partially overlaps the period when the following sustain pulse IPyb rises. That is, the waveform IPyb is formed when the falling period of leading sustain pulse IPx overlaps with the rising period of sustain pulse IPy. Due to this overlap, a discharge current in a discharge cell C instantly increases such that when the sustain pulse IPyb rises, it instantly exceeds a voltage Vs. Moreover, as shown in Figure 8, the rising time duration until sustain

pulses IPy and IPyb reach the fixed voltage Vs is the same and is determined by the application of switch S1, and the duration for maintaining the voltage fixed at Vs is the same and is determined by the application of switch S3. Furthermore, there is no disclosure or suggestion to modify Naganuma such that the rising time duration of pulse IPyb is shorter than the rising time duration of pulse IPy.

In other words, Naganuma does not disclose providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field, a sustain pulse in the first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in the second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration and a falling period of falling in the specified time, wherein the first leading edge duration and the second leading edge duration are a time until a voltage is fixed by the power source by elevating a voltage of the scan electrode or the sustain electrode by a power recovery circuit, as recited in claim 1.

For at least the reasons set forth above, it is believed clear that claim 1 is not anticipated by Naganuma. Furthermore, it is submitted that an ordinary artisan would have no reason to modify Naganuma in such a manner, as to result in, or otherwise render obvious, the invention of claim 1. Therefore, it is respectfully submitted that claims 1 and 2-4 depending therefrom are clearly allowable.

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimizu et al. (U.S. Patent No. 6,466,186) (hereinafter referred to as “Shimizu”).

The above-mentioned rejection is submitted to be inapplicable to amended claim 1 for the following reasons.

Claim 1 recites a method of driving a plasma display panel including, in part, providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field, a sustain pulse in the first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in the second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration and a falling period of falling in the specified time. Wherein the first leading edge duration and the second leading edge duration are a time until a voltage is

fixed by the power source by elevating a voltage of the scan electrode or the sustain electrode by a power recovery circuit.

Thus, the present invention as recited in claim 1, stabilizes a following initializing operation, especially selective initializing operations, and ensures driving margins (see page 14, lines 8-16 of the substitute specification). Moreover, because in the falling period power is recovered as in the leading edge durations, reactive power is suppressed by keeping the falling times of the sustain pulses in the falling period constant.

In contrast to the present invention, Shimizu does not disclose providing a sustain pulse in a first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in a second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration and a falling period of falling in the specified time. Instead, Shimizu discloses a drive method of the PDP in “which the time from the start of charge recovery of the sustaining pulse to the fixation to the sustaining potential (i.e., the durations, t1-t2, t5-t6, and t9-t10), and the time to the fixation to the ground potential (i.e., the falling time), are made successively longer from the leading sustaining pulse toward the n-th sustaining pulse” (see Figure 8 and col. 8, lines 16-22). Thus, the leading edge durations (i.e., t1-t2, t5-t6, and t9-t10) and the falling times of subsequent sustaining pulses have successively longer durations. Moreover, there is no disclosure or suggestion in Shimizu to modify the leading edge durations of the sustaining pulses such that a subsequent leading edge has a shorter duration, and that the falling times are of a same specified duration.

The Applicants respectfully submit that by virtue of disclosing leading edge durations (i.e., t1-t2, t5-t6, and t9-t10) and falling times of subsequent sustaining pulses having successively longer durations, Shimizu teaches against providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field, a sustain pulse in the first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in the second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration.

Moreover, modifying the present invention as recited in claim 1, by increasing the second leading edge durations and increasing the falling periods renders the present invention

unsatisfactory for its intended purpose because a following initializing operation would not be stabilized, driving margins would not be ensured, and increases in reactive power would not be suppressed. Because the proposed modification renders the present invention unsatisfactory for its intended purpose, Shimizu teaches against the present invention.

Thus, for at least the reasons set forth above, Shimizu does not disclose providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field, a sustain pulse in the first sustaining period that has a first leading edge duration and a falling period of falling in a specified time, and a sustain pulse in the second sustaining period that has a second leading edge duration such that the second leading edge duration is shorter than the first leading edge duration and a falling period of falling in the specified time, wherein the first leading edge duration and the second leading edge duration are a time until a voltage is fixed by the power source by elevating a voltage of the scan electrode or the sustain electrode by a power recovery circuit, as recited in claim 1.

The Examiner asserted that Shimizu fails to teach a sustain pulse in the second sustaining period that has a second leading edge duration, such that the second leading edge duration is shorter than the first leading edge duration. The Examiner also asserted that because the Applicants have not disclosed a specific advantage or criticality to having a decreasing pulse versus an increasing pulse, decreasing the pulse rising time is an obvious matter of design choice.

However, as discussed above, the leading edge durations and falling times of Shimizu increase successively. Thus, modifying the present invention as recited in claim 1, by increasing the second leading edge durations and increasing the falling times renders the present invention unsatisfactory for its intended purpose because a following initializing operation would not be stabilized, driving margins would not be ensured, and increases in reactive power would not be suppressed.

For at least the reasons set forth above, it is respectfully submitted that the above-discussed features as recited in claim 1 are not disclosed in Shimizu. Furthermore, it is respectfully submitted that one of ordinary skill in the art at the time the invention was made would not have modified Shimizu in such a manner as to result in, or otherwise render obvious, the invention of claim 1. Therefore, it is respectfully submitted that claims 1 and claims 2-4

depending therefrom are clearly allowable.

In view of the foregoing amendments and remarks, all of the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action are respectfully solicited.

Should the Examiner believe there are any remaining issues that must be resolved before this application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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